

#2



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/989,350

DATE: 01/26/2002

TIME: 13:47:25

Input Set : N:\Crf3\RULE60\09989350.raw

Output Set: N:\CRF3\01252002\I989350.raw

1 <110> APPLICANT: Lin, Lih-Ling
 2 Chen, Jennifer H.
 3 Schievella, Andrea
 4 Graham, James
 5 <120> TITLE OF INVENTION: Novel TNF receptor death domain ligand proteins and
 6 inhibitors of ligand binding(as amended)
 7 <130> FILE REFERENCE: GFN-5232CP4DV3
 8 <140> CURRENT APPLICATION NUMBER: US/09/989,350
 9 <141> CURRENT FILING DATE: 2001-11-20
 10 <150> PRIOR APPLICATION NUMBER: 09/185,258
 11 <151> PRIOR FILING DATE: 1998-11-02
 12 <150> PRIOR APPLICATION NUMBER: 08/839,032
 13 <151> PRIOR FILING DATE: 1997-04-23
 14 <150> PRIOR APPLICATION NUMBER: 08/698,551
 15 <151> PRIOR FILING DATE: 1996-08-15
 16 <150> PRIOR APPLICATION NUMBER: 08/602,228
 17 <151> PRIOR FILING DATE: 1996-02-15
 18 <150> PRIOR APPLICATION NUMBER: 08/533,901
 19 <151> PRIOR FILING DATE: 1995-09-26
 20 <150> PRIOR APPLICATION NUMBER: 08/494,440
 21 <151> PRIOR FILING DATE: 1995-06-19
 22 <150> PRIOR APPLICATION NUMBER: 08/327,514
 23 <151> PRIOR FILING DATE: 1994-10-19
 24 <160> NUMBER OF SEQ ID NOS: 19
 25 <170> SOFTWARE: PatentIn Ver. 2.0
 27 <210> SEQ ID NO: 1
 28 <211> LENGTH: 2158
 29 <212> TYPE: DNA
 30 <213> ORGANISM: Homo sapiens
 31 <220> FEATURE:
 32 <221> NAME/KEY: CDS
 33 <222> LOCATION: (2)..(1231)
 34 <400> SEQUENCE: 1
 35 c agc aat gca ggt gat gga cca ggt ggc gag ggc agt gtt cac ctg gca 49
 36 Ser Asn Ala Gly Asp Gly Pro Gly Gly Glu Gly Ser Val His Leu Ala
 37 1 5 10 15
 38 agc tct cgg ggc act ttg tct gat agt gaa att gag acc aac tct gcc 97
 39 Ser Ser Arg Gly Thr Leu Ser Asp Ser Glu Ile.Glu Thr Asn Ser Ala
 40 20 25 30
 41 aca agc acc atc ttt ggt aaa gcc cac agc ttg aag cca agc ata aag 145
 42 Thr Ser Thr Ile Phe Gly Lys Ala His Ser Leu Lys Pro Ser Ile Lys
 43 35 40 45
 44 gag aag ctg gca ggc agc ccc att cgt act tct gaa gat gtg agc cag 193

ENTERED

RAW SEQUENCE LISTING

DATE: 01/26/2002

PATENT APPLICATION: US/09/989,350

TIME: 13:47:25

Input Set : N:\Crf3\RULE60\09989350.raw

Output Set: N:\CRF3\01252002\I989350.raw

45	Glu	Lys	Leu	Ala	Gly	Ser	Pro	Ile	Arg	Thr	Ser	Glu	Asp	Val	Ser	Gln	
46		50					55					60					
47	cga	gtc	tat	ctc	tat	gag	gga	ctc	cta	ggc	aaa	gag	cgt	tct	act	tta	241
48	Arg	Val	Tyr	Leu	Tyr	Glu	Gly	Leu	Leu	Gly	Lys	Glu	Arg	Ser	Thr	Leu	
49		65				70					75					80	
50	tgg	gac	caa	atg	caa	ttc	tgg	gaa	gat	gcc	ttc	tta	gat	gct	gtg	atg	289
51	Trp	Asp	Gln	Met	Gln	Phe	Trp	Glu	Asp	Ala	Phe	Leu	Asp	Ala	Val	Met	
52					85					90					95		
53	ttg	gag	aga	gaa	ggg	atg	ggg	atg	gac	cag	ggg	ccc	cag	gaa	atg	atc	337
54	Leu	Glu	Arg	Glu	Gly	Met	Gly	Met	Asp	Gln	Gly	Pro	Gln	Glu	Met	Ile	
55				100					105					110			
56	gac	agg	tac	ctg	tcc	ctt	gga	gaa	cat	gac	cgg	aag	cgc	ctg	gaa	gat	385
57	Asp	Arg	Tyr	Leu	Ser	Leu	Gly	Glu	His	Asp	Arg	Lys	Arg	Leu	Glu	Asp	
58			115					120					125				
59	gat	gaa	gat	cgc	ttg	ctg	gcc	aca	ctt	ctg	cac	aac	ctc	atc	tcc	tac	433
60	Asp	Glu	Asp	Arg	Leu	Leu	Ala	Thr	Leu	Leu	His	Asn	Leu	Ile	Ser	Tyr	
61		130					135						140				
62	atg	ctg	ctg	atg	aag	gta	aat	aag	aat	gac	atc	cgc	aag	aag	gtg	agg	481
63	Met	Leu	Leu	Met	Lys	Val	Asn	Lys	Asn	Asp	Ile	Arg	Lys	Lys	Val	Arg	
64		145				150					155					160	
65	cgc	cta	atg	gga	aag	tgc	cac	att	ggg	ctt	gtg	tac	agc	cag	caa	atc	529
66	Arg	Leu	Met	Gly	Lys	Ser	His	Ile	Gly	Leu	Val	Tyr	Ser	Gln	Gln	Ile	
67					165					170					175		
68	aat	gag	gtg	ctt	gat	cag	ctg	gcg	aac	ctg	aat	gga	cgc	gat	ctc	tct	577
69	Asn	Glu	Val	Leu	Asp	Gln	Leu	Ala	Asn	Leu	Asn	Gly	Arg	Asp	Leu	Ser	
70				180					185					190			
71	atc	tgg	tcc	agt	ggc	agc	cgg	cac	atg	aag	aag	cag	aca	ttt	gtg	gta	625
72	Ile	Trp	Ser	Ser	Gly	Ser	Arg	His	Met	Lys	Lys	Gln	Thr	Phe	Val	Val	
73			195					200					205				
74	cat	gca	ggg	aca	gat	aca	aac	gga	gat	atc	ttt	ttc	atg	gag	gtg	tgc	673
75	His	Ala	Gly	Thr	Asp	Thr	Asn	Gly	Asp	Ile	Phe	Phe	Met	Glu	Val	Cys	
76			210					215					220				
77	gat	gac	tgt	gtg	gtg	ttg	cgt	agt	aac	atc	gga	aca	gtg	tat	gag	cgc	721
78	Asp	Asp	Cys	Val	Val	Leu	Arg	Ser	Asn	Ile	Gly	Thr	Val	Tyr	Glu	Arg	
79		225				230					235				240		
80	tgg	tgg	tac	gag	aag	ctc	atc	aac	atg	acc	tac	tgt	ccc	aag	acg	aag	769
81	Trp	Trp	Tyr	Glu	Lys	Leu	Ile	Asn	Met	Thr	Tyr	Cys	Pro	Lys	Thr	Lys	
82					245					250					255		
83	gtg	ttg	tgc	ttg	tgg	cgt	aga	aat	ggc	tct	gag	acc	cag	ctc	aac	aag	817
84	Val	Leu	Cys	Leu	Trp	Arg	Arg	Asn	Gly	Ser	Glu	Thr	Gln	Leu	Asn	Lys	
85				260					265					270			
86	ttc	tat	act	aaa	aag	tgt	cgg	gag	ctg	tac	tac	tgt	gtg	aag	gac	agc	865
87	Phe	Tyr	Thr	Lys	Lys	Cys	Arg	Glu	Leu	Tyr	Tyr	Cys	Val	Lys	Asp	Ser	
88			275					280					285				
89	atg	gag	cgc	gct	gcc	gcc	cga	cag	caa	agc	atc	aaa	ccc	gga	cct	gaa	913
90	Met	Glu	Arg	Ala	Ala	Ala	Arg	Gln	Gln	Ser	Ile	Lys	Pro	Gly	Pro	Glu	
91			290					295					300				
92	ttg	ggt	ggc	gag	ttc	cct	gtg	cag	gac	ctg	aag	act	ggt	gag	ggt	ggc	961
93	Leu	Gly	Gly	Glu	Phe	Pro	Val	Gln	Asp	Leu	Lys	Thr	Gly	Glu	Gly	Gly	

RAW SEQUENCE LISTING

DATE: 01/26/2002

PATENT APPLICATION: US/09/989,350

TIME: 13:47:25

Input Set : N:\Crf3\RULE60\09989350.raw

Output Set: N:\CRF3\01252002\I989350.raw

```

94      305      310      315      320
95      ctg ctg cag gtg acc ctg gaa ggg atc aac ctc aaa ttc atg cac aat 1009
96      Leu Leu Gln Val Thr Leu Glu Gly Ile Asn Leu Lys Phe Met His Asn
97      325      330      335
98      cag gtt ttc ata gag ctg aat cac att aaa aag tgc aat aca gtt cga 1057
99      Gln Val Phe Ile Glu Leu Asn His Ile Lys Lys Cys Asn Thr Val Arg
100     340      345      350
101     ggc gtc ttt gtc ctg gag gaa ttt gtt cct gaa att aaa gaa gtg gtg 1105
102     Gly Val Phe Val Leu Glu Glu Phe Val Pro Glu Ile Lys Glu Val Val
103     355      360      365
104     agc cac aag tac aag aca cca atg gcc cac gaa atc tgc tac tcc gta 1153
105     Ser His Lys Tyr Lys Thr Pro Met Ala His Glu Ile Cys Tyr Ser Val
106     370      375      380
107     tta tgt ctc ttc tcg tac gtg gct gca gtt cat agc agt gag gaa gat 1201
108     Leu Cys Leu Phe Ser Tyr Val Ala Ala Val His Ser Ser Glu Glu Asp
109     385      390      395      400
110     ctc aga acc ccg ccc cgg cct gtc tct agc tgatggagag gggctacgca 1251
111     Leu Arg Thr Pro Pro Arg Pro Val Ser Ser
112     405      410
113     gctgccccag cccagggcac gcccttggcc ccttgctgtt cccaagtgca cgatgctgct 1311
114     gtgactgagg agtggatgat gctcgtgtgt cctctgcaag ccccttgcctg tggcttgggt 1371
115     gggtagcggg tatgtgtccc tctgagtgtg tcttgagcgt gtccaccttc tccctctcca 1431
116     ctcccagaag accaaactgc cttcccctca gggctcaaga atgtgtacag tctgtggggc 1491
117     cggtgtgaac ccactatttt gtgtccttga gacatttgtg ttgtgggttc ttgtccttgt 1551
118     ccctggcggt aactgtccac tgcaagagtc tggctctccc ttctctgtga cccggcatga 1611
119     ctgggcgcct ggagcagttt cactctgtga ggagtgaagg aacctggggg ctcacctctt 1671
120     cagaggaagg gcacagagag gaagggaaga attggggggc agcgggagtg agtggcagcc 1731
121     tccctgcttc cttctgcatt cccaagccgg cagctactgc ccagggcccg cagtgttggc 1791
122     tgctgctgc cacagcctct gtgactgcag tggagcggcg aattccctgt ggctgccac 1851
123     gccttcggca tcagaggatg gagtggtcga ggctagtgga gtcccaggga ccgctggctg 1911
124     ctctgcctga gcatcaggga gggggcagga aagaccaagc tgggtttgca catctgtctg 1971
125     caggctgtct ctccaggcac ggggtgtcag gagggagaga cagcctgggt atgggcaaga 2031
126     aatgactgta aatatttcag cccacatta tttatagaaa atgtacagtt gtgtgaatgt 2091
127     gaaataaatg tcttcacctc ccaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2151
128     aaaaaaa 2158
130 <210> SEQ ID NO: 2
131 <211> LENGTH: 410
132 <212> TYPE: PRT
133 <213> ORGANISM: Homo sapiens
134 <400> SEQUENCE: 2
135     Ser Asn Ala Gly Asp Gly Pro Gly Gly Glu Gly Ser Val His Leu Ala
136     1      5      10      15
137     Ser Ser Arg Gly Thr Leu Ser Asp Ser Glu Ile Glu Thr Asn Ser Ala
138     20      25      30
139     Thr Ser Thr Ile Phe Gly Lys Ala His Ser Leu Lys Pro Ser Ile Lys
140     35      40      45
141     Glu Lys Leu Ala Gly Ser Pro Ile Arg Thr Ser Glu Asp Val Ser Gln
142     50      55      60
143     Arg Val Tyr Leu Tyr Glu Gly Leu Leu Gly Lys Glu Arg Ser Thr Leu

```

RAW SEQUENCE LISTING

DATE: 01/26/2002

PATENT APPLICATION: US/09/989,350

TIME: 13:47:25

Input Set : N:\Crf3\RULE60\09989350.raw

Output Set: N:\CRF3\01252002\I989350.raw

144	65	70	75	80
145	Trp Asp Gln Met Gln Phe Trp Glu Asp Ala Phe Leu Asp Ala Val Met			
146		85	90	95
147	Leu Glu Arg Glu Gly Met Gly Met Asp Gln Gly Pro Gln Glu Met Ile			
148		100	105	110
149	Asp Arg Tyr Leu Ser Leu Gly Glu His Asp Arg Lys Arg Leu Glu Asp			
150		115	120	125
151	Asp Glu Asp Arg Leu Leu Ala Thr Leu Leu His Asn Leu Ile Ser Tyr			
152		130	135	140
153	Met Leu Leu Met Lys Val Asn Lys Asn Asp Ile Arg Lys Lys Val Arg			
154		145	150	155
155	Arg Leu Met Gly Lys Ser His Ile Gly Leu Val Tyr Ser Gln Gln Ile			
156		165	170	175
157	Asn Glu Val Leu Asp Gln Leu Ala Asn Leu Asn Gly Arg Asp Leu Ser			
158		180	185	190
159	Ile Trp Ser Ser Gly Ser Arg His Met Lys Lys Gln Thr Phe Val Val			
160		195	200	205
161	His Ala Gly Thr Asp Thr Asn Gly Asp Ile Phe Phe Met Glu Val Cys			
162		210	215	220
163	Asp Asp Cys Val Val Leu Arg Ser Asn Ile Gly Thr Val Tyr Glu Arg			
164		225	230	235
165	Trp Trp Tyr Glu Lys Leu Ile Asn Met Thr Tyr Cys Pro Lys Thr Lys			
166		245	250	255
167	Val Leu Cys Leu Trp Arg Arg Asn Gly Ser Glu Thr Gln Leu Asn Lys			
168		260	265	270
169	Phe Tyr Thr Lys Lys Cys Arg Glu Leu Tyr Tyr Cys Val Lys Asp Ser			
170		275	280	285
171	Met Glu Arg Ala Ala Ala Arg Gln Gln Ser Ile Lys Pro Gly Pro Glu			
172		290	295	300
173	Leu Gly Gly Glu Phe Pro Val Gln Asp Leu Lys Thr Gly Glu Gly Gly			
174		305	310	315
175	Leu Leu Gln Val Thr Leu Glu Gly Ile Asn Leu Lys Phe Met His Asn			
176		325	330	335
177	Gln Val Phe Ile Glu Leu Asn His Ile Lys Lys Cys Asn Thr Val Arg			
178		340	345	350
179	Gly Val Phe Val Leu Glu Glu Phe Val Pro Glu Ile Lys Glu Val Val			
180		355	360	365
181	Ser His Lys Tyr Lys Thr Pro Met Ala His Glu Ile Cys Tyr Ser Val			
182		370	375	380
183	Leu Cys Leu Phe Ser Tyr Val Ala Ala Val His Ser Ser Glu Glu Asp			
184		385	390	395
185	Leu Arg Thr Pro Pro Arg Pro Val Ser Ser			400
186		405	410	

188 <210> SEQ ID NO: 3

189 <211> LENGTH: 826

190 <212> TYPE: DNA

191 <213> ORGANISM: Homo sapiens

192 <220> FEATURE:

193 <221> NAME/KEY: CDS

RAW SEQUENCE LISTING

DATE: 01/26/2002

PATENT APPLICATION: US/09/989,350

TIME: 13:47:25

Input Set : N:\Crif3\RULE60\09989350.raw

Output Set: N:\CRF3\01252002\I989350.raw

```

194 <222> LOCATION: (2)..(415)
195 <400> SEQUENCE: 3
196   g gag gtg cag gac ctc ttc gaa gcc cag ggc aat gac cga ctg aag ctg 49
197   Glu Val Gln Asp Leu Phe Glu Ala Gln Gly Asn Asp Arg Leu Lys Leu
198       1           5           10           15
199   ctg gtg ctg tac agt gga gag gat gat gag ctg cta cag cgg gca gct 97
200   Leu Val Leu Tyr Ser Gly Glu Asp Asp Glu Leu Leu Gln Arg Ala Ala
201       20           25           30
202   gcc ggg ggc ttg gcc atg ctt acc tcc atg cgg ccc acg ctc tgc agc 145
203   Ala Gly Gly Leu Ala Met Leu Thr Ser Met Arg Pro Thr Leu Cys Ser
204       35           40           45
205   cgc att ccc caa gtg acc aca cac tgg ctg gag atc ctg cag gcc ctg 193
206   Arg Ile Pro Gln Val Thr Thr His Trp Leu Glu Ile Leu Gln Ala Leu
207       50           55           60
208   ctt ctg agc tcc aac cag gag ctg cag cac cgg ggt gct gtg gtg gtg 241
209   Leu Leu Ser Ser Asn Gln Glu Leu Gln His Arg Gly Ala Val Val Val
210       65           70           75           80
211   ctg aac atg gtg gag gcc tgc agg gag att gcc agc acc ctg atg gag 289
212   Leu Asn Met Val Glu Ala Ser Arg Glu Ile Ala Ser Thr Leu Met Glu
213       85           90           95
214   agt gag atg atg gag atc ttg tca gtg cta gct aag ggt gac cac agc 337
215   Ser Glu Met Met Glu Ile Leu Ser Val Leu Ala Lys Gly Asp His Ser
216       100          105          110
217   cct gtc aca agg gct gct gca gcc tgc ctg gac aaa gca gtg gaa tat 385
218   Pro Val Thr Arg Ala Ala Ala Cys Leu Asp Lys Ala Val Glu Tyr
219       115          120          125
220   ggg ctt atc caa ccc aac caa gat gga gag tgaggggggtt gtccctgggc 435
221   Gly Leu Ile Gln Pro Asn Gln Asp Gly Glu
222       130          135
223   ccaaggctca tgcacacgct acctattgtg gcacggagag taaggacgga agcagctttg 495
224   gctgggtggtg gctggcatgc ccaatactct tgcccatcct cgcttgctgc cctaggatgt 555
225   cctctgttct gagtcagcgg ccacgttcag tcacacagcc ctgcttggcc agcactgcct 615
226   gcagcctcac tcagagggggc cctttttctg tactactgta gtcagctggg aatggggaag 675
227   gtgcatccca acacagcctg tggatcctgg ggcatttgga agggcgca ca catcagcagc 735
228   ctcaccagct gtgagcctgc tatcaggcct gccctccaa taaaagtgtg tagaactcca 795
229   aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 826
231 <210> SEQ ID NO: 4
232 <211> LENGTH: 138
233 <212> TYPE: PRT
234 <213> ORGANISM: Homo sapiens
235 <400> SEQUENCE: 4
236   Glu Val Gln Asp Leu Phe Glu Ala Gln Gly Asn Asp Arg Leu Lys Leu
237       1           5           10           15
238   Leu Val Leu Tyr Ser Gly Glu Asp Asp Glu Leu Leu Gln Arg Ala Ala
239       20           25           30
240   Ala Gly Gly Leu Ala Met Leu Thr Ser Met Arg Pro Thr Leu Cys Ser
241       35           40           45
242   Arg Ile Pro Gln Val Thr Thr His Trp Leu Glu Ile Leu Gln Ala Leu
243       50           55           60

```

VERIFICATION SUMMARY

DATE: 01/26/2002

PATENT APPLICATION: US/09/989,350

TIME: 13:47:26

Input Set : N:\Crf3\RULE60\09989350.raw

Output Set: N:\CRF3\01252002\I989350.raw